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Attorney's Docket 7040-40

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Lootz	Examiner:	
Ser. No.:	09/939,211	Art Group:	
Title:	REPOSITIONABLE STENT		
Filed:	24 August 2001	Date:	24 October 2001

PRELIMINARY AMENDMENT

This Preliminary Amendment is filed with the filing of the missing parts in the above case, which claims priority from an application filed in Germany as 100 44 043.6 on 30 August 2000. The fees for the claims should be calculated based on the claims remaining after the entry of this Preliminary Amendment, which results in 104 total and 3 independent claims. Consistent with the modifications to 37 CFR §1.121, the applicant has provided the amended claims in a clean form on the enclosed replacement sheets.

Amendments to the Disclosure

The specification as filed has been altered from the literal translation document received to delete information above the title, to insert headings according to US practice, and to insert paragraph numbering in lieu of line numbering. No new matter has been added. The specification as amended is provided in a substitute specification as allowed under 37 CFR §1.125.

Amendments to the Figures

None at this time.

Amendments to the Abstract:

None at this time.

Amendments to the Claims

After the heading "CLAIMS" and before the beginning of the claims, please insert the words: -- What is claimed is: --

Please amend the claims as follows:

1. (amended) A stent, in particular a peripheral stent, for expansion from a first condition in which it can be introduced into a vessel [(8; 8''')] into a second condition in which it holds the vessel [(8; 8''')] in an expanded state, comprising :

a plurality [number] of annular support portions [(2, 2.1, 2.2)] comprising bar elements [(3; 3'; 3''; 3''')] which are connected in a [the] longitudinal direction of the stent [(1; 1'; 1''' 1''')] by way of a plurality of connecting bars [(4; 4')], wherein the stent [characterized in that it is so designed that it] is displaceable with respect to a sheathing that bears [(8, 9; 8'''; 9''') bearing] at least in a portion-wise manner thereagainst in a first direction [(5; 5'; 5''' 5''')] without hooking engagement on the sheathing (8, 9; 8'''; 9''').

2. (amended) The [A] stent of claim 1, wherein the stent, [as set forth in claim 1 characterized in that] in a condition of being expanded at least in a portion-wise manner , [it] is displaceable with respect to a sheathing that surrounds the stent [(8, 9; 8'''; 9''') surrounding it] at least in a portion-wise manner in a first direction [(5; 5'; 5''; 5''')] without hooking engagement on the sheathing [(8, 9; 8'''; 9''')].

3. (amended) The [A] stent of claim 1, wherein [as set forth in claim 1 or claim 2 characterized in that] the bar elements [(3; 3'; 3''')] and the connecting bars [(4; 4')] are of such a configuration and arrangement that the stent [(1; 1'; 1'')] is displaceable with respect to the sheathing that bears [(8, 9; 8'''; 9''') bearing] at least in a portion-wise manner thereagainst in a first direction [(5; 5'; 5''' 5''')] without hooking engagement on the sheathing [(8, 9; 8'''; 9''')].

4. (amended) The [A] stent of claim 1, wherein [as set forth in one of the preceding claims characterized in that] the connecting bars [(4; 4')] between a first said annular support portion [(2.1)] and a second said annular support portion that [(2.2) which] is in adjacent relationship in the direction of displacement [(5; 5')] engage in a [the] region of the portions, projecting in the first direction [(5; 5')], of the bar elements [(3; 3')] of the first said annular support portion [(2.1)], for preventing hooking engagement between the stent [(1; 1')] and the sheathing [(8, 9)] upon displacement of the stent [(1; 1')].

5. (amended) The [A] stent of claim 1, wherein [as set forth in one of the preceding claims characterized in that] at least a first said annular support portion [(2.1)] and a second said annular support portion [(2.2)] in adjacent relationship in the first direction [(5; 5')] are each formed by a respective bar element [(3; 3')] extending in a meander configuration in a [the] peripheral direction of the stent (1; 1') and the connecting bars (4; 4') between the first said annular support portion [(2.1)] and the second said annular support portion [(2.2)] engage near a turning point [in the region of the turning points], adjoining the second said support portion [(2.2)], of the bar element [(3; 3')] of the first said support portion [(2.1)].

6. (amended) The [A] stent of claim 5, wherein [as set forth in one of claims 3 through 5 characterized in that] the respective connecting bar [(4; 4')] respectively engages a [the] point that [, which] projects furthest in the first direction [(5; 5')], of the bar element [(3; 3')] of the first said annular support portion [(2.1)].

7. (amended) The [A] stent of claim 6, wherein [as set forth in one of claims 3 through 6 characterized in that] the connecting bars [(4; 4')] engage a [the] central region of the second said annular support portion [(2.2)] with respect to the longitudinal direction of the stent [(1; 1')].

8. (amended) The [A] stent of claim 7, wherein [as set forth in claim 7 characterized in that] at least the second said annular support portion [(2.2)] is formed by a bar element that [(3; 3') which] extends a meander configuration in the peripheral direction of the stent and the connecting bars [(4; 4')] engage in the central region of the bar element [(3; 3') of the second support portion (2.2)] between the turning points [(3.1; 3.1')] of the bar element [(3; 3') of the second support portion (2.2)], with respect to the longitudinal direction of the stent [(1; 1')].

9. (amended) The [A] stent of claim 1, wherein [as set forth in one of the preceding claims characterized in that] the connecting bars [(4; 4')] are sufficiently long to ensure [of a sufficient length which ensures] flexibility of the stent [(1; 1')] with respect to its longitudinal direction.

10. (amended) The [A] stent of claim 1, wherein [as set forth in one of the preceding claims characterized in that] the connecting bars [(4; 4')] are designed and arranged to avoid twisting of the stent [(1; 1')] over its length.

11. (amended) The [A] stent of claim 10, wherein [as set forth in claim 10 characterized in that] the connecting bars [(4; 4')] are arranged in the longitudinal direction of the stent [(1; 1')] individually or in a portion-wise manner on alternate sides with respect to lines extending along the longitudinal direction of the stent [(1; 1')], in such a way that a change in angle is imparted in opposite directions individually or in portion-wise manner at least to their points of engagement, which are in the first direction [(5; 5')], on the bar elements [(3; 3')], upon expansion of the stent [(1; 1')], in a plane [the] tangential to [plane of] the peripheral surface of the stent.

12. (amended) The [A] stent of claim 1, wherein the stent expands in a self-induced manner [as set forth in one of the preceding claims characterized in that it is adapted for self-induced expansion] from the first condition [in which it can be introduced enclosed by a sheathing device (9; 9''') into a vessel (8; 8''')] into the second condition [in which it holds the vessel (8; 8''') expanded], as a result of removal of the sheathing device [(9; 9''')] from the stent [(1; 1'; 1''; 1''')], which removal occurs in the first direction [(5; 5'; 5''; 5''')] with respect to the stent [(1; 1'; 1''; 1''')], the stent having a plurality [and it has a number] of annular support portions [(2, 2.1, 2.2)] comprising bar elements that [(3; 3'; 3''; 2''') which] are connected in the longitudinal direction of the stent [(1; 1'; 1''; 1''')] by way of connecting bars [(4; 4')], such that [wherein it is so designed that] when the sheathing device [(9; 9''')] is not yet completely removed the stent can be restored to its first condition again by producing a relative movement of the sheathing device [(9; 9''')] with respect to the stent [(1; 1'; 1''; 1''')] in a second direction opposite [(14) in opposite relationship] to the first direction [(5; 5'; 5''; 5''')] without hooking engagement on the sheathing device [(9; 9''')].

13. (amended) The [A] stent of claim 12, wherein [as set forth in claim 12 characterized in that] the bar elements [(3; 3'; 3'')] and the connecting bars [(4; 4')] are of such a configuration and arrangement that when the sheathing device [(9)] is not yet completely removed the stent [(1; 1'; 1)] can be restored to its first condition again by producing a relative movement of the

sheathing device [(9)] with respect to the stent [(1; 1'; 1)] in the [a] second direction [(14) in opposite relationship to the first direction (5; 5'; 5)] without hooking engagement on the sheathing device [(9)].

14. (amended) The [A] stent of claim 13, wherein [as set forth in claim 12 or claim 13 characterized in that] the connecting bars [(4; 4')] between a first said annular support portion [(2.1)] and a second said annular support portion [(2.2)] in adjacent relationship in the first direction [(5; 5')] engage in the region of the portions, which project in the first direction [(5; 5')], of the bar elements [(3; 3')] of the first annular support portion [(2.1)] to prevent hooking engagement between the stent [(1; 1')] and the sheathing device [(9)] when the stent [(1; 1')] is restored to its first condition.

15. (amended) The [A] stent of claim 14, wherein [as set forth in one of claims 12 through 14 characterized in that] the stent material includes a shape memory alloy, in particular a nickel-titanium alloy.

16. (amended) The [A] stent of claim 15, wherein [as set forth in claim 15 characterized in that] at body temperature the stent material is in a stress-induced martensitic state in the first condition of the stent and in an austenitic state in the second condition of the stent.

17. (amended) The [A] stent of claim 16, wherein [as set forth in claim 15 or claim 16 characterized in that the geometry of] the bar elements have a geometry [(3; 3'; 3"; 3"')] is so selected] and/or a [the] width of the bar elements [(3; 3'; 3"; 3"')] varies over the length thereof in such a way that the stresses which occur in the bar elements [(3; 3'; 3"; 3"')] are below the respective plastic deformation limit of the stent material when the stent material makes the transition in the first condition of the stent from the martensitic state into a stress-induced martensitic state as a result of an increase in temperature [are below the respective plastic deformation limit of the stent material].

18. (amended) The [A] stent of claim 17, wherein [as set forth in claim 17 characterized in that] at least one said annular support portion is formed by a bar element which extends in a

meander configuration in the peripheral direction of the stent [(1")] and whose width decreases towards the center [(16)] between two turning points [(3.1'')].

19. (amended) The [A] stent of claim 18, wherein [as set forth in one of claims 15 through 18 characterized in that] at least one said annular support portion [(2, 2.1, 2.2)] is formed by a bar element that [(3; 3'; 3"; 3"') which] extends in a meander configuration in the peripheral direction of the stent [(1; 1'; 1"; 1"')] and that has a [whose] direction of curvature which changes in the central region [(16)] between two turning points [(3.1; 3.1")].

20. (amended) The [A] stent of claim 19, wherein [as set forth in one of claims 15 through 19 characterized in that] at least one said annular support portion [(2, 2.1, 2.2)] is formed by a bar element that [(3; 3'; 3"; 3"') which] extends in a meander configuration in the peripheral direction of the stent [(1; 1'; 1"; 1"')] and of which at least a [the] center line is in the shape of an elliptical arc [a] segment [of an elliptical arc] in the region of the turning points [(3.1; 3.1")].

21. (amended) The [A] stent of claim 20, wherein [as set forth in one of claims 15 through 19 20 in that] at least one said annular support portion [(2, 2.1, 2.2)] is formed by a bar element that [(3; 3'; 3"; 3"') which] extends in a meander configuration in the peripheral direction of the stent [(1; 1'; 1"; 1"')] wherein each two bar element portions that [(17, 18) which] are adjacent in the peripheral direction of the stent [(1; 1'; 1"; 1"')] and that [which] extend between the turning points [(3.1; 3.1")] form the limbs of a V-shape.

22. (amended) A catheter for implanting the [a] stent of claim 21, said catheter [(1; 1'; 1"; 1"') as set forth in one of claims 1 through 21] comprising a distal end, in the region of which [there is provided] a sheathing device is provided [(9; 9"')] for receiving the stent [(1; 1'; 1"; 1"')] in its first condition, and a device for producing the relative movement between the sheathing device [(9; 9"')] and the stent [(1; 1'; 1"; 1"')] in the first direction [(5; 5'; 5"; 5"')], wherein [characterized in that there are provided] a device is provided for producing the relative movement between the sheathing device [(9; 9"')] and the stent [(1; 1'; 1"; 1"')] in a second direction [(14) in] opposite [relationship] to the first direction [(5; 5'; 5"; 5"')] and a [holding]

device [(10, 12)] for holding the stent [(1; 1'; 1"; 1"')] during said relative movement in the second direction [(14)].

23. (amended) The [A] catheter of claim 22, further comprising [as set forth in claim 22 characterized in that there are provided] a sheathing tube , a distal end of which [(9; 9"') whose distal end] forms the sheathing device and a holding element [(10, 12)] arranged displaceably in said sheathing tube [(9; 9"')] for producing the relative movement in the first and second directions [(5, 14)], for holding the stent during the relative movement in the second direction [(14)].

24. (amended) A catheter arrangement comprising the [a] catheter of claim 22 having [(7; 7"') as set forth in claim 21 or claim 22, in the sheathing device of which is arranged] a stent of claim 1 in the sheathing device [(1; 1'; 1"; 1"') as set forth in one of claims 1 through 20].

25. (amended) A method of positioning a stent of claim 1 [(1; 1'; 1"; 1"') as set forth in one of claims 1 through 21] in a vessel [(8; 8"')], said method comprising the steps of:

moving the stent [in which] in a first step [the stent (1; 1'; 1"; 1"') is moved] in a first condition to an [the] expansion location [,] ; and

expanding the stent at least partially in a second step [the stent (1; 1'; 1"; 1"') is at least partially expanded,] ;

wherein [there is provided a checking step in which] the position of the stent [(1; 1'; 1"; 1"')] is detected with respect to the expansion location in a checking step, characterized in that in the second step the stent [(1; 1'; 1"; 1"')] is only partially expanded and in at least one correction step the stent [it] is put into a third condition in which it is in a sheathing device [(9; 9"')] and its position with respect to the expansion location is modified.

26. (amended) The [A] method of claim 25, wherein: [as set forth in claim 25 characterized in that] in the first step the stent [(1; 1'; 1"; 1"')] is moved in a sheathing device [(9; 9"')] to the expansion location, in the second step the stent [(1; 1'; 1"; 1"')] is partially expanded by partial or after partial removal of the sheathing device [(9; 9"')] from the stent [(1; 1'; 1"; 1"')] and in

the correction step the stent [(1; 1'; 1"; 1"")] is put into a third condition in which it is in the sheathing device [(9; 9"")] and its position with respect to the expansion location is modified.

Please add the following new claims:

27. (new) The stent of claim 1, wherein the bar elements and the connecting bars are of such a configuration and arrangement that the stent is displaceable with respect to the sheathing that bears at least in a portion-wise manner thereagainst in a first direction without hooking engagement on the sheathing.

28. (new) The stent of claim 3, wherein the connecting bars between a first said annular support portion and a second said annular support portion that is in adjacent relationship in the direction of displacement engage in a region of the portions, projecting in the first direction, of the bar elements of the first said annular support portion, for preventing hooking engagement between the stent and the sheathing upon displacement of the stent.

29. (new) The stent of claim 27, wherein the connecting bars between a first said annular support portion and a second said annular support portion that is in adjacent relationship in the direction of displacement engage in a region of the portions, projecting in the first direction, of the bar elements of the first said annular support portion, for preventing hooking engagement between the stent and the sheathing upon displacement of the stent.

30. (new) The stent of claim 4, wherein at least a first said annular support portion and a second said annular support portion in adjacent relationship in the first direction are each formed by a respective bar element extending in a meander configuration in a peripheral direction of the stent and the connecting bars between the first said annular support portion and the second said annular support portion engage near a turning point, adjoining the second said support portion, of the bar element of the first said support portion.

31. (new) The stent of claim 28, wherein at least a first said annular support portion and a second said annular support portion in adjacent relationship in the first direction are each formed

by a respective bar element extending in a meander configuration in a peripheral direction of the stent and the connecting bars between the first said annular support portion and the second said annular support portion engage near a turning point, adjoining the second said support portion, of the bar element of the first said support portion.

32. (new) The stent of claim 29, wherein at least a first said annular support portion and a second said annular support portion in adjacent relationship in the first direction are each formed by a respective bar element extending in a meander configuration in a peripheral direction of the stent and the connecting bars between the first said annular support portion and the second said annular support portion engage near a turning point, adjoining the second said support portion, of the bar element of the first said support portion.

33. (new) The stent of claim 30, wherein the respective connecting bar respectively engages a point that projects furthest in the first direction, of the bar element of the first said annular support portion.

34. (new) The stent of claim 31, wherein the respective connecting bar respectively engages a point that projects furthest in the first direction, of the bar element of the first said annular support portion.

35. (new) The stent of claim 32, wherein the respective connecting bar respectively engages a point that projects furthest in the first direction, of the bar element of the first said annular support portion.

36. (new) The stent of claim 3, wherein the connecting bars engage a central region of the second said annular support portion with respect to the longitudinal direction of the stent.

37. (new) The stent of claim 33, wherein the connecting bars engage a central region of the second said annular support portion with respect to the longitudinal direction of the stent.

38. (new) The stent of claim 34, wherein the connecting bars engage a central region of the second said annular support portion with respect to the longitudinal direction of the stent.

39. (new) The stent of claim 35, wherein the connecting bars engage a central region of the second said annular support portion with respect to the longitudinal direction of the stent.

40. (new) The stent of claim 36, wherein at least the second said annular support portion is formed by a bar element that extends a meander configuration in the peripheral direction of the stent and the connecting bars engage in the central region of the bar element between the turning points of the bar element, with respect to the longitudinal direction of the stent.

41. (new) The stent of claim 37, wherein at least the second said annular support portion is formed by a bar element that extends a meander configuration in the peripheral direction of the stent and the connecting bars engage in the central region of the bar element between the turning points of the bar element, with respect to the longitudinal direction of the stent.

42. (new) The stent of claim 38, wherein at least the second said annular support portion is formed by a bar element that extends a meander configuration in the peripheral direction of the stent and the connecting bars engage in the central region of the bar element between the turning points of the bar element, with respect to the longitudinal direction of the stent.

43. (new) The stent of claim 39, wherein at least the second said annular support portion is formed by a bar element that extends a meander configuration in the peripheral direction of the stent and the connecting bars engage in the central region of the bar element between the turning points of the bar element, with respect to the longitudinal direction of the stent.

44. (new) The stent of claim 5, wherein the connecting bars are sufficiently long to ensure flexibility of the stent with respect to its longitudinal direction.

45. (new) The stent of claim 40, wherein the connecting bars are sufficiently long to ensure flexibility of the stent with respect to its longitudinal direction.

46. (new) The stent of claim 41, wherein the connecting bars are sufficiently long to ensure flexibility of the stent with respect to its longitudinal direction.

47. (new) The stent of claim 42, wherein the connecting bars are sufficiently long to ensure flexibility of the stent with respect to its longitudinal direction.

48. (new) The stent of claim 43, wherein the connecting bars are sufficiently long to ensure flexibility of the stent with respect to its longitudinal direction.

49. (new) The stent of claim 8, wherein the connecting bars are sufficiently long to ensure flexibility of the stent with respect to its longitudinal direction.

50. (new) The stent of claim 10, wherein the connecting bars are designed and arranged to avoid twisting of the stent over its length.

51. (new) The stent of claim 44, wherein the connecting bars are designed and arranged to avoid twisting of the stent over its length.

52. (new) The stent of claim 45, wherein the connecting bars are designed and arranged to avoid twisting of the stent over its length.

53. (new) The stent of claim 46, wherein the connecting bars are designed and arranged to avoid twisting of the stent over its length.

54. (new) The stent of claim 47, wherein the connecting bars are designed and arranged to avoid twisting of the stent over its length.

55. (new) The stent of claim 48, wherein the connecting bars are designed and arranged to avoid twisting of the stent over its length.

56. (new) The stent of claim 49, wherein the connecting bars are designed and arranged to avoid twisting of the stent over its length.

57. (new) The stent of claim 50, wherein the connecting bars are arranged in the longitudinal direction of the stent individually or in a portion-wise manner on alternate sides with respect to lines extending along the longitudinal direction of the stent , in such a way that a change in angle is imparted in opposite directions individually or in portion-wise manner at least to their points of engagement, which are in the first direction, on the bar elements, upon expansion of the stent, in a plane tangential to the peripheral surface of the stent.

58. (new) The stent of claim 51, wherein the connecting bars are arranged in the longitudinal direction of the stent individually or in a portion-wise manner on alternate sides with respect to lines extending along the longitudinal direction of the stent , in such a way that a change in angle is imparted in opposite directions individually or in portion-wise manner at least to their points of engagement, which are in the first direction, on the bar elements, upon expansion of the stent, in a plane tangential to the peripheral surface of the stent.

59. (new) The stent of claim 52, wherein the connecting bars are arranged in the longitudinal direction of the stent individually or in a portion-wise manner on alternate sides with respect to lines extending along the longitudinal direction of the stent , in such a way that a change in angle is imparted in opposite directions individually or in portion-wise manner at least to their points of engagement, which are in the first direction, on the bar elements, upon expansion of the stent, in a plane tangential to the peripheral surface of the stent.

60. (new) The stent of claim 53, wherein the connecting bars are arranged in the longitudinal direction of the stent individually or in a portion-wise manner on alternate sides with respect to lines extending along the longitudinal direction of the stent , in such a way that a change in angle is imparted in opposite directions individually or in portion-wise manner at least to their points of engagement, which are in the first direction, on the bar elements, upon expansion of the stent, in a plane tangential to the peripheral surface of the stent.

61. (new) The stent of claim 54, wherein the connecting bars are arranged in the longitudinal direction of the stent individually or in a portion-wise manner on alternate sides with respect to lines extending along the longitudinal direction of the stent , in such a way that a change in angle is imparted in opposite directions individually or in portion-wise manner at least to their points of engagement, which are in the first direction, on the bar elements, upon expansion of the stent, in a plane tangential to the peripheral surface of the stent.

62. (new) The stent of claim 55, wherein the connecting bars are arranged in the longitudinal direction of the stent individually or in a portion-wise manner on alternate sides with respect to lines extending along the longitudinal direction of the stent , in such a way that a change in angle is imparted in opposite directions individually or in portion-wise manner at least to their points of engagement, which are in the first direction, on the bar elements, upon expansion of the stent, in a plane tangential to the peripheral surface of the stent.

63. (new) The stent of claim 56, wherein the connecting bars are arranged in the longitudinal direction of the stent individually or in a portion-wise manner on alternate sides with respect to lines extending along the longitudinal direction of the stent , in such a way that a change in angle is imparted in opposite directions individually or in portion-wise manner at least to their points of engagement, which are in the first direction, on the bar elements, upon expansion of the stent, in a plane tangential to the peripheral surface of the stent.

64. (new) The stent of claim 11, wherein the stent expands in a self-induced manner from the first condition into the second condition, as a result of removal of the sheathing device from the stent, which removal occurs in the first direction with respect to the stent, the stent having a plurality of annular support portions comprising bar elements that are connected in the longitudinal direction of the stent by way of connecting bars, such that when the sheathing device is not yet completely removed the stent can be restored to its first condition again by producing a relative movement of the sheathing device with respect to the stent in a second direction opposite to the first direction without hooking engagement on the sheathing device.

65. (new) The stent of claim 1, wherein the stent expands in a self-induced manner from the first condition into the second condition, as a result of removal of the sheathing device from the stent, which removal occurs in the first direction with respect to the stent, the stent having a plurality of annular support portions comprising bar elements that are connected in the longitudinal direction of the stent by way of connecting bars, such that when the sheathing device is not yet completely removed the stent can be restored to its first condition again by producing a relative movement of the sheathing device with respect to the stent in a second direction opposite to the first direction without hooking engagement on the sheathing device.

66. (new) The stent of claim 62, wherein the stent expands in a self-induced manner from the first condition into the second condition, as a result of removal of the sheathing device from the stent, which removal occurs in the first direction with respect to the stent, the stent having a plurality of annular support portions comprising bar elements that are connected in the longitudinal direction of the stent by way of connecting bars, such that when the sheathing device is not yet completely removed the stent can be restored to its first condition again by producing a relative movement of the sheathing device with respect to the stent in a second direction opposite to the first direction without hooking engagement on the sheathing device.

67. (new) The stent of claim 5, wherein the stent expands in a self-induced manner from the first condition into the second condition, as a result of removal of the sheathing device from the stent, which removal occurs in the first direction with respect to the stent, the stent having a plurality of annular support portions comprising bar elements that are connected in the longitudinal direction of the stent by way of connecting bars, such that when the sheathing device is not yet completely removed the stent can be restored to its first condition again by producing a relative movement of the sheathing device with respect to the stent in a second direction opposite to the first direction without hooking engagement on the sheathing device.

68. (new) The stent of claim 65, wherein the bar elements and the connecting bars are of such a configuration and arrangement that when the sheathing device is not yet completely removed the stent can be restored to its first condition again by producing a relative movement of

the sheathing device with respect to the stent in the second direction without hooking engagement on the sheathing device.

69. (new) The stent of claim 66, wherein the bar elements and the connecting bars are of such a configuration and arrangement that when the sheathing device is not yet completely removed the stent can be restored to its first condition again by producing a relative movement of the sheathing device with respect to the stent in the second direction without hooking engagement on the sheathing device.

70. (new) The stent of claim 67, wherein the bar elements and the connecting bars are of such a configuration and arrangement that when the sheathing device is not yet completely removed the stent can be restored to its first condition again by producing a relative movement of the sheathing device with respect to the stent in the second direction without hooking engagement on the sheathing device.

71. (new) The stent of claim 13, wherein the connecting bars between a first said annular support portion and a second said annular support portion in adjacent relationship in the first direction engage in the region of the portions, which project in the first direction, of the bar elements of the first annular support portion to prevent hooking engagement between the stent and the sheathing device when the stent is restored to its first condition.

72. (new) The stent of claim 66, wherein the connecting bars between a first said annular support portion and a second said annular support portion in adjacent relationship in the first direction engage in the region of the portions, which project in the first direction, of the bar elements of the first annular support portion to prevent hooking engagement between the stent and the sheathing device when the stent is restored to its first condition.

73. (new) The stent of claim 69, wherein the connecting bars between a first said annular support portion and a second said annular support portion in adjacent relationship in the first direction engage in the region of the portions, which project in the first direction, of the bar

elements of the first annular support portion to prevent hooking engagement between the stent and the sheathing device when the stent is restored to its first condition.

74. (new) The stent of claim 67, wherein the connecting bars between a first said annular support portion and a second said annular support portion in adjacent relationship in the first direction engage in the region of the portions, which project in the first direction, of the bar elements of the first annular support portion to prevent hooking engagement between the stent and the sheathing device when the stent is restored to its first condition.

75. (new) The stent of claim 70, wherein the connecting bars between a first said annular support portion and a second said annular support portion in adjacent relationship in the first direction engage in the region of the portions, which project in the first direction, of the bar elements of the first annular support portion to prevent hooking engagement between the stent and the sheathing device when the stent is restored to its first condition.

76. (new) The stent of claim 12, wherein the connecting bars between a first said annular support portion and a second said annular support portion in adjacent relationship in the first direction engage in the region of the portions, which project in the first direction, of the bar elements of the first annular support portion to prevent hooking engagement between the stent and the sheathing device when the stent is restored to its first condition.

77. (new) The stent of claim 12, wherein the stent material includes a shape memory alloy, in particular a nickel-titanium alloy.

78. (new) The stent of claim 77, wherein at body temperature the stent material is in a stress-induced martensitic state in the first condition of the stent and in an austenitic state in the second condition of the stent.

79. (new) The stent of claim 66, wherein the stent material includes a shape memory alloy, in particular a nickel-titanium alloy.

80. (new) The stent of claim 79, wherein at body temperature the stent material is in a stress-induced martensitic state in the first condition of the stent and in an austenitic state in the second condition of the stent.

81. (new) The stent of claim 67, wherein the stent material includes a shape memory alloy, in particular a nickel-titanium alloy.

82. (new) The stent of claim 81, wherein at body temperature the stent material is in a stress-induced martensitic state in the first condition of the stent and in an austenitic state in the second condition of the stent.

83. (new) The stent of claim 73, wherein the stent material includes a shape memory alloy, in particular a nickel-titanium alloy.

84. (new) The stent of claim 83, wherein at body temperature the stent material is in a stress-induced martensitic state in the first condition of the stent and in an austenitic state in the second condition of the stent.

85. (new) The stent of claim 78, wherein the bar elements have a geometry and/or a width of the bar elements varies over the length thereof in such a way that the stresses which occur in the bar elements are below the respective plastic deformation limit of the stent material when the stent material makes the transition in the first condition of the stent from the martensitic state into a stress-induced martensitic state as a result of an increase in temperature.

86. (new) The stent of claim 85, wherein at least one said annular support portion is formed by a bar element which extends in a meander configuration in the peripheral direction of the stent and whose width decreases towards the center between two turning points.

87. (new) The stent of claim 80, wherein the bar elements have a geometry and/or a width of the bar elements varies over the length thereof in such a way that the stresses which occur in the bar elements are below the respective plastic deformation limit of the stent material when the

stent material makes the transition in the first condition of the stent from the martensitic state into a stress-induced martensitic state as a result of an increase in temperature.

88. (new) The stent of claim 87, wherein at least one said annular support portion is formed by a bar element which extends in a meander configuration in the peripheral direction of the stent and whose width decreases towards the center between two turning points.

89. (new) The stent of claim 82, wherein the bar elements have a geometry and/or a width of the bar elements varies over the length thereof in such a way that the stresses which occur in the bar elements are below the respective plastic deformation limit of the stent material when the stent material makes the transition in the first condition of the stent from the martensitic state into a stress-induced martensitic state as a result of an increase in temperature.

90. (new) The stent of claim 89, wherein at least one said annular support portion is formed by a bar element which extends in a meander configuration in the peripheral direction of the stent and whose width decreases towards the center between two turning points.

91. (new) The stent of claim 84, wherein the bar elements have a geometry and/or a width of the bar elements varies over the length thereof in such a way that the stresses which occur in the bar elements are below the respective plastic deformation limit of the stent material when the stent material makes the transition in the first condition of the stent from the martensitic state into a stress-induced martensitic state as a result of an increase in temperature.

92. (new) The stent of claim 91, wherein at least one said annular support portion is formed by a bar element which extends in a meander configuration in the peripheral direction of the stent and whose width decreases towards the center between two turning points.

93. (new) The stent of claim 78, wherein at least one said annular support portion is formed by a bar element that extends in a meander configuration in the peripheral direction of the stent and that has a direction of curvature which changes in the central region between two turning points.

94. (new) The stent of claim 78, wherein at least one said annular support portion is formed by a bar element that extends in a meander configuration in the peripheral direction of the stent and of which at least a center line is in the shape of an elliptical arc segment in the region of the turning points.

95. (new) The stent of claim 78, wherein at least one said annular support portion is formed by a bar element that extends in a meander configuration in the peripheral direction of the stent wherein each two bar element portions that are adjacent in the peripheral direction of the stent and that extend between the turning points form the limbs of a V-shape.

96. (new) The stent of claim 80, wherein at least one said annular support portion is formed by a bar element that extends in a meander configuration in the peripheral direction of the stent and that has a direction of curvature which changes in the central region between two turning points.

97. (new) The stent of claim 80, wherein at least one said annular support portion is formed by a bar element that extends in a meander configuration in the peripheral direction of the stent and of which at least a center line is in the shape of an elliptical arc segment in the region of the turning points.

98. (new) The stent of claim 80, wherein at least one said annular support portion is formed by a bar element that extends in a meander configuration in the peripheral direction of the stent wherein each two bar element portions that are adjacent in the peripheral direction of the stent and that extend between the turning points form the limbs of a V-shape.

99. (new) The stent of claim 82, wherein at least one said annular support portion is formed by a bar element that extends in a meander configuration in the peripheral direction of the stent and that has a direction of curvature which changes in the central region between two turning points.

100. (new) The stent of claim 82, wherein at least one said annular support portion is formed by a bar element that extends in a meander configuration in the peripheral direction of the stent and of which at least a center line is in the shape of an elliptical arc segment in the region of the turning points.

101. (new) The stent of claim 82, wherein at least one said annular support portion is formed by a bar element that extends in a meander configuration in the peripheral direction of the stent wherein each two bar element portions that are adjacent in the peripheral direction of the stent and that extend between the turning points form the limbs of a V-shape.

102. (new) The stent of claim 84, wherein at least one said annular support portion is formed by a bar element that extends in a meander configuration in the peripheral direction of the stent and that has a direction of curvature which changes in the central region between two turning points.

103. (new) The stent of claim 84, wherein at least one said annular support portion is formed by a bar element that extends in a meander configuration in the peripheral direction of the stent and of which at least a center line is in the shape of an elliptical arc segment in the region of the turning points.

104. (new) The stent of claim 84, wherein at least one said annular support portion is formed by a bar element that extends in a meander configuration in the peripheral direction of the stent wherein each two bar element portions that are adjacent in the peripheral direction of the stent and that extend between the turning points form the limbs of a V-shape.

REMARKS

The above claims have been amended to more closely correspond them to United States claiming practice, namely, by removing multiple dependencies, especially improper multiple dependencies, by removing reference numerals, and by clarifying antecedent basis issues. These amendments to the claims are fully supported by the literal translation into English of the specification as filed in Germany, and they do not introduce new subject matter.

Respectfully submitted,

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CLAIMS AS AMENDED

1. (amended) A stent, in particular a peripheral stent, for expansion from a first condition in which it can be introduced into a vessel into a second condition in which it holds the vessel in an expanded state, comprising:

a plurality of annular support portions comprising bar elements which are connected in a longitudinal direction of the stent by way of a plurality of connecting bars, wherein the stent is displaceable with respect to a sheathing that bears at least in a portion-wise manner thereagainst in a first direction without hooking engagement on the sheathing.

2. (amended) The stent of claim 1, wherein the stent, in a condition of being expanded at least in a portion-wise manner, is displaceable with respect to a sheathing that surrounds the stent at least in a portion-wise manner in a first direction without hooking engagement on the sheathing.

3. (amended) The stent of claim 1, wherein the bar elements and the connecting bars are of such a configuration and arrangement that the stent is displaceable with respect to the sheathing that bears at least in a portion-wise manner thereagainst in a first direction without hooking engagement on the sheathing.

4. (amended) The stent of claim 1, wherein the connecting bars between a first said annular support portion and a second said annular support portion that is in adjacent relationship in the direction of displacement engage in a region of the portions, projecting in the first direction, of the bar elements of the first said annular support portion, for preventing hooking engagement between the stent and the sheathing upon displacement of the stent.

5. (amended) The stent of claim 1, wherein at least a first said annular support portion and a second said annular support portion in adjacent relationship in the first direction are each formed by a respective bar element extending in a meander configuration in a peripheral direction of the stent and the connecting bars between the first said annular support portion and the second said

annular support portion engage near a turning point, adjoining the second said support portion, of the bar element of the first said support portion.

6. (amended) The stent of claim 5, wherein the respective connecting bar respectively engages a point that projects furthest in the first direction, of the bar element of the first said annular support portion.

7. (amended) The stent of claim 6, wherein the connecting bars engage a central region of the second said annular support portion with respect to the longitudinal direction of the stent.

8. (amended) The stent of claim 7, wherein at least the second said annular support portion is formed by a bar element that extends a meander configuration in the peripheral direction of the stent and the connecting bars engage in the central region of the bar element between the turning points of the bar element, with respect to the longitudinal direction of the stent.

9. (amended) The stent of claim 1, wherein the connecting bars are sufficiently long to ensure flexibility of the stent with respect to its longitudinal direction.

10. (amended) The stent of claim 1, wherein the connecting bars are designed and arranged to avoid twisting of the stent over its length.

11. (amended) The stent of claim 10, wherein the connecting bars are arranged in the longitudinal direction of the stent individually or in a portion-wise manner on alternate sides with respect to lines extending along the longitudinal direction of the stent , in such a way that a change in angle is imparted in opposite directions individually or in portion-wise manner at least to their points of engagement, which are in the first direction, on the bar elements, upon expansion of the stent, in a plane tangential to the peripheral surface of the stent.

12. (amended) The stent of claim 1, wherein the stent expands in a self-induced manner from the first condition into the second condition, as a result of removal of the sheathing device from the stent, which removal occurs in the first direction with respect to the stent, the stent

having a plurality of annular support portions comprising bar elements that are connected in the longitudinal direction of the stent by way of connecting bars, such that when the sheathing device is not yet completely removed the stent can be restored to its first condition again by producing a relative movement of the sheathing device with respect to the stent in a second direction opposite to the first direction without hooking engagement on the sheathing device.

13. (amended) The stent of claim 12, wherein the bar elements and the connecting bars are of such a configuration and arrangement that when the sheathing device is not yet completely removed the stent can be restored to its first condition again by producing a relative movement of the sheathing device with respect to the stent in the second direction without hooking engagement on the sheathing device.

14. (amended) The stent of claim 13, wherein the connecting bars between a first said annular support portion and a second said annular support portion in adjacent relationship in the first direction engage in the region of the portions, which project in the first direction, of the bar elements of the first annular support portion to prevent hooking engagement between the stent and the sheathing device when the stent is restored to its first condition.

15. (amended) The stent of claim 14, wherein the stent material includes a shape memory alloy, in particular a nickel-titanium alloy.

16. (amended) The stent of claim 15, wherein at body temperature the stent material is in a stress-induced martensitic state in the first condition of the stent and in an austenitic state in the second condition of the stent.

17. (amended) The stent of claim 16, wherein the bar elements have a geometry and/or a width of the bar elements varies over the length thereof in such a way that the stresses which occur in the bar elements are below the respective plastic deformation limit of the stent material when the stent material makes the transition in the first condition of the stent from the martensitic state into a stress-induced martensitic state as a result of an increase in temperature.

18. (amended) The stent of claim 17, wherein at least one said annular support portion is formed by a bar element which extends in a meander configuration in the peripheral direction of the stent and whose width decreases towards the center between two turning points.

19. (amended) The stent of claim 18, wherein at least one said annular support portion is formed by a bar element that extends in a meander configuration in the peripheral direction of the stent and that has a direction of curvature which changes in the central region between two turning points.

20. (amended) The stent of claim 19, wherein at least one said annular support portion is formed by a bar element that extends in a meander configuration in the peripheral direction of the stent and of which at least a center line is in the shape of an elliptical arc segment in the region of the turning points.

21. (amended) The stent of claim 20, wherein at least one said annular support portion is formed by a bar element that extends in a meander configuration in the peripheral direction of the stent wherein each two bar element portions that are adjacent in the peripheral direction of the stent and that extend between the turning points form the limbs of a V-shape.

22. (amended) A catheter for implanting the stent of claim 21, said catheter comprising a distal end, in the region of which a sheathing device is provided for receiving the stent in its first condition, and a device for producing the relative movement between the sheathing device and the stent in the first direction, wherein a device is provided for producing the relative movement between the sheathing device and the stent in a second direction opposite and a device for holding the stent during said relative movement in the second direction.

23. (amended) The catheter of claim 22, further comprising a sheathing tube, a distal end of which forms the sheathing device and a holding element arranged displaceably in said sheathing tube for producing the relative movement in the first and second directions, for holding the stent during the relative movement in the second direction.

24. (amended) A catheter arrangement comprising the catheter of claim 22 having a stent of claim 1 in the sheathing device.

25. (amended) A method of positioning a stent of claim 1 in a vessel, said method comprising the steps of:

moving the stent in a first step in a first condition to an expansion location; and

expanding the stent at least partially in a second step;

wherein the position of the stent is detected with respect to the expansion location in a checking step, characterized in that in the second step the stent is only partially expanded and in at least one correction step the stent is put into a third condition in which it is in a sheathing device and its position with respect to the expansion location is modified.

26. (amended) The method of claim 25, wherein:

in the first step the stent is moved in a sheathing device to the expansion location, in the second step the stent is partially expanded by partial or after partial removal of the sheathing device from the stent and in the correction step the stent is put into a third condition in which it is in the sheathing device and its position with respect to the expansion location is modified.

27. (new) The stent of claim 1, wherein the bar elements and the connecting bars are of such a configuration and arrangement that the stent is displaceable with respect to the sheathing that bears at least in a portion-wise manner thereagainst in a first direction without hooking engagement on the sheathing.

28. (new) The stent of claim 3, wherein the connecting bars between a first said annular support portion and a second said annular support portion that is in adjacent relationship in the direction of displacement engage in a region of the portions, projecting in the first direction, of the bar elements of the first said annular support portion, for preventing hooking engagement between the stent and the sheathing upon displacement of the stent.

29. (new) The stent of claim 27, wherein the connecting bars between a first said annular support portion and a second said annular support portion that is in adjacent relationship in the

direction of displacement engage in a region of the portions, projecting in the first direction, of the bar elements of the first said annular support portion, for preventing hooking engagement between the stent and the sheathing upon displacement of the stent.

30. (new) The stent of claim 4, wherein at least a first said annular support portion and a second said annular support portion in adjacent relationship in the first direction are each formed by a respective bar element extending in a meander configuration in a peripheral direction of the stent and the connecting bars between the first said annular support portion and the second said annular support portion engage near a turning point, adjoining the second said support portion, of the bar element of the first said support portion.

31. (new) The stent of claim 28, wherein at least a first said annular support portion and a second said annular support portion in adjacent relationship in the first direction are each formed by a respective bar element extending in a meander configuration in a peripheral direction of the stent and the connecting bars between the first said annular support portion and the second said annular support portion engage near a turning point, adjoining the second said support portion, of the bar element of the first said support portion.

32. (new) The stent of claim 29, wherein at least a first said annular support portion and a second said annular support portion in adjacent relationship in the first direction are each formed by a respective bar element extending in a meander configuration in a peripheral direction of the stent and the connecting bars between the first said annular support portion and the second said annular support portion engage near a turning point, adjoining the second said support portion, of the bar element of the first said support portion.

33. (new) The stent of claim 30, wherein the respective connecting bar respectively engages a point that projects furthest in the first direction, of the bar element of the first said annular support portion.

34. (new) The stent of claim 31, wherein the respective connecting bar respectively engages a point that projects furthest in the first direction, of the bar element of the first said annular support portion.

35. (new) The stent of claim 32, wherein the respective connecting bar respectively engages a point that projects furthest in the first direction, of the bar element of the first said annular support portion.

36. (new) The stent of claim 3, wherein the connecting bars engage a central region of the second said annular support portion with respect to the longitudinal direction of the stent.

37. (new) The stent of claim 33, wherein the connecting bars engage a central region of the second said annular support portion with respect to the longitudinal direction of the stent.

38. (new) The stent of claim 34, wherein the connecting bars engage a central region of the second said annular support portion with respect to the longitudinal direction of the stent.

39. (new) The stent of claim 35, wherein the connecting bars engage a central region of the second said annular support portion with respect to the longitudinal direction of the stent.

40. (new) The stent of claim 36, wherein at least the second said annular support portion is formed by a bar element that extends a meander configuration in the peripheral direction of the stent and the connecting bars engage in the central region of the bar element between the turning points of the bar element, with respect to the longitudinal direction of the stent.

41. (new) The stent of claim 37, wherein at least the second said annular support portion is formed by a bar element that extends a meander configuration in the peripheral direction of the stent and the connecting bars engage in the central region of the bar element between the turning points of the bar element, with respect to the longitudinal direction of the stent.

42. (new) The stent of claim 38, wherein at least the second said annular support portion is formed by a bar element that extends a meander configuration in the peripheral direction of the stent and the connecting bars engage in the central region of the bar element between the turning points of the bar element, with respect to the longitudinal direction of the stent.

43. (new) The stent of claim 39, wherein at least the second said annular support portion is formed by a bar element that extends a meander configuration in the peripheral direction of the stent and the connecting bars engage in the central region of the bar element between the turning points of the bar element, with respect to the longitudinal direction of the stent.

44. (new) The stent of claim 5, wherein the connecting bars are sufficiently long to ensure flexibility of the stent with respect to its longitudinal direction.

45. (new) The stent of claim 40, wherein the connecting bars are sufficiently long to ensure flexibility of the stent with respect to its longitudinal direction.

46. (new) The stent of claim 41, wherein the connecting bars are sufficiently long to ensure flexibility of the stent with respect to its longitudinal direction.

47. (new) The stent of claim 42, wherein the connecting bars are sufficiently long to ensure flexibility of the stent with respect to its longitudinal direction.

48. (new) The stent of claim 43, wherein the connecting bars are sufficiently long to ensure flexibility of the stent with respect to its longitudinal direction.

49. (new) The stent of claim 8, wherein the connecting bars are sufficiently long to ensure flexibility of the stent with respect to its longitudinal direction.

50. (new) The stent of claim 10, wherein the connecting bars are designed and arranged to avoid twisting of the stent over its length.

51. (new) The stent of claim 44, wherein the connecting bars are designed and arranged to avoid twisting of the stent over its length.

52. (new) The stent of claim 45, wherein the connecting bars are designed and arranged to avoid twisting of the stent over its length.

53. (new) The stent of claim 46, wherein the connecting bars are designed and arranged to avoid twisting of the stent over its length.

54. (new) The stent of claim 47, wherein the connecting bars are designed and arranged to avoid twisting of the stent over its length.

55. (new) The stent of claim 48, wherein the connecting bars are designed and arranged to avoid twisting of the stent over its length.

56. (new) The stent of claim 49, wherein the connecting bars are designed and arranged to avoid twisting of the stent over its length.

57. (new) The stent of claim 50, wherein the connecting bars are arranged in the longitudinal direction of the stent individually or in a portion-wise manner on alternate sides with respect to lines extending along the longitudinal direction of the stent , in such a way that a change in angle is imparted in opposite directions individually or in portion-wise manner at least to their points of engagement, which are in the first direction, on the bar elements, upon expansion of the stent, in a plane tangential to the peripheral surface of the stent.

58. (new) The stent of claim 51, wherein the connecting bars are arranged in the longitudinal direction of the stent individually or in a portion-wise manner on alternate sides with respect to lines extending along the longitudinal direction of the stent , in such a way that a change in angle is imparted in opposite directions individually or in portion-wise manner at least to their points of engagement, which are in the first direction, on the bar elements, upon expansion of the stent, in a plane tangential to the peripheral surface of the stent.

59. (new) The stent of claim 52, wherein the connecting bars are arranged in the longitudinal direction of the stent individually or in a portion-wise manner on alternate sides with respect to lines extending along the longitudinal direction of the stent , in such a way that a change in angle is imparted in opposite directions individually or in portion-wise manner at least to their points of engagement, which are in the first direction, on the bar elements, upon expansion of the stent, in a plane tangential to the peripheral surface of the stent.

60. (new) The stent of claim 53, wherein the connecting bars are arranged in the longitudinal direction of the stent individually or in a portion-wise manner on alternate sides with respect to lines extending along the longitudinal direction of the stent , in such a way that a change in angle is imparted in opposite directions individually or in portion-wise manner at least to their points of engagement, which are in the first direction, on the bar elements, upon expansion of the stent, in a plane tangential to the peripheral surface of the stent.

61. (new) The stent of claim 54, wherein the connecting bars are arranged in the longitudinal direction of the stent individually or in a portion-wise manner on alternate sides with respect to lines extending along the longitudinal direction of the stent , in such a way that a change in angle is imparted in opposite directions individually or in portion-wise manner at least to their points of engagement, which are in the first direction, on the bar elements, upon expansion of the stent, in a plane tangential to the peripheral surface of the stent.

62. (new) The stent of claim 55, wherein the connecting bars are arranged in the longitudinal direction of the stent individually or in a portion-wise manner on alternate sides with respect to lines extending along the longitudinal direction of the stent , in such a way that a change in angle is imparted in opposite directions individually or in portion-wise manner at least to their points of engagement, which are in the first direction, on the bar elements, upon expansion of the stent, in a plane tangential to the peripheral surface of the stent.

63. (new) The stent of claim 56, wherein the connecting bars are arranged in the longitudinal direction of the stent individually or in a portion-wise manner on alternate sides with respect to

lines extending along the longitudinal direction of the stent , in such a way that a change in angle is imparted in opposite directions individually or in portion-wise manner at least to their points of engagement, which are in the first direction, on the bar elements, upon expansion of the stent, in a plane tangential to the peripheral surface of the stent.

64. (new) The stent of claim 11, wherein the stent expands in a self-induced manner from the first condition into the second condition, as a result of removal of the sheathing device from the stent, which removal occurs in the first direction with respect to the stent, the stent having a plurality of annular support portions comprising bar elements that are connected in the longitudinal direction of the stent by way of connecting bars, such that when the sheathing device is not yet completely removed the stent can be restored to its first condition again by producing a relative movement of the sheathing device with respect to the stent in a second direction opposite to the first direction without hooking engagement on the sheathing device.

65. (new) The stent of claim 1, wherein the stent expands in a self-induced manner from the first condition into the second condition, as a result of removal of the sheathing device from the stent, which removal occurs in the first direction with respect to the stent, the stent having a plurality of annular support portions comprising bar elements that are connected in the longitudinal direction of the stent by way of connecting bars, such that when the sheathing device is not yet completely removed the stent can be restored to its first condition again by producing a relative movement of the sheathing device with respect to the stent in a second direction opposite to the first direction without hooking engagement on the sheathing device.

66. (new) The stent of claim 62, wherein the stent expands in a self-induced manner from the first condition into the second condition, as a result of removal of the sheathing device from the stent, which removal occurs in the first direction with respect to the stent, the stent having a plurality of annular support portions comprising bar elements that are connected in the longitudinal direction of the stent by way of connecting bars, such that when the sheathing device is not yet completely removed the stent can be restored to its first condition again by producing a relative movement of the sheathing device with respect to the stent in a second direction opposite to the first direction without hooking engagement on the sheathing device.

67. (new) The stent of claim 5, wherein the stent expands in a self-induced manner from the first condition into the second condition, as a result of removal of the sheathing device from the stent, which removal occurs in the first direction with respect to the stent, the stent having a plurality of annular support portions comprising bar elements that are connected in the longitudinal direction of the stent by way of connecting bars, such that when the sheathing device is not yet completely removed the stent can be restored to its first condition again by producing a relative movement of the sheathing device with respect to the stent in a second direction opposite to the first direction without hooking engagement on the sheathing device.

68. (new) The stent of claim 65, wherein the bar elements and the connecting bars are of such a configuration and arrangement that when the sheathing device is not yet completely removed the stent can be restored to its first condition again by producing a relative movement of the sheathing device with respect to the stent in the second direction without hooking engagement on the sheathing device.

69. (new) The stent of claim 66, wherein the bar elements and the connecting bars are of such a configuration and arrangement that when the sheathing device is not yet completely removed the stent can be restored to its first condition again by producing a relative movement of the sheathing device with respect to the stent in the second direction without hooking engagement on the sheathing device.

70. (new) The stent of claim 67, wherein the bar elements and the connecting bars are of such a configuration and arrangement that when the sheathing device is not yet completely removed the stent can be restored to its first condition again by producing a relative movement of the sheathing device with respect to the stent in the second direction without hooking engagement on the sheathing device.

71. (new) The stent of claim 13, wherein the connecting bars between a first said annular support portion and a second said annular support portion in adjacent relationship in the first direction engage in the region of the portions, which project in the first direction, of the bar

elements of the first annular support portion to prevent hooking engagement between the stent and the sheathing device when the stent is restored to its first condition.

72. (new) The stent of claim 66, wherein the connecting bars between a first said annular support portion and a second said annular support portion in adjacent relationship in the first direction engage in the region of the portions, which project in the first direction, of the bar elements of the first annular support portion to prevent hooking engagement between the stent and the sheathing device when the stent is restored to its first condition.

73. (new) The stent of claim 69, wherein the connecting bars between a first said annular support portion and a second said annular support portion in adjacent relationship in the first direction engage in the region of the portions, which project in the first direction, of the bar elements of the first annular support portion to prevent hooking engagement between the stent and the sheathing device when the stent is restored to its first condition.

74. (new) The stent of claim 67, wherein the connecting bars between a first said annular support portion and a second said annular support portion in adjacent relationship in the first direction engage in the region of the portions, which project in the first direction, of the bar elements of the first annular support portion to prevent hooking engagement between the stent and the sheathing device when the stent is restored to its first condition.

75. (new) The stent of claim 70, wherein the connecting bars between a first said annular support portion and a second said annular support portion in adjacent relationship in the first direction engage in the region of the portions, which project in the first direction, of the bar elements of the first annular support portion to prevent hooking engagement between the stent and the sheathing device when the stent is restored to its first condition.

76. (new) The stent of claim 12, wherein the connecting bars between a first said annular support portion and a second said annular support portion in adjacent relationship in the first direction engage in the region of the portions, which project in the first direction, of the bar

elements of the first annular support portion to prevent hooking engagement between the stent and the sheathing device when the stent is restored to its first condition.

77. (new) The stent of claim 12, wherein the stent material includes a shape memory alloy, in particular a nickel-titanium alloy.

78. (new) The stent of claim 77, wherein at body temperature the stent material is in a stress-induced martensitic state in the first condition of the stent and in an austenitic state in the second condition of the stent.

79. (new) The stent of claim 66, wherein the stent material includes a shape memory alloy, in particular a nickel-titanium alloy.

80. (new) The stent of claim 79, wherein at body temperature the stent material is in a stress-induced martensitic state in the first condition of the stent and in an austenitic state in the second condition of the stent.

81. (new) The stent of claim 67, wherein the stent material includes a shape memory alloy, in particular a nickel-titanium alloy.

82. (new) The stent of claim 81, wherein at body temperature the stent material is in a stress-induced martensitic state in the first condition of the stent and in an austenitic state in the second condition of the stent.

83. (new) The stent of claim 73, wherein the stent material includes a shape memory alloy, in particular a nickel-titanium alloy.

84. (new) The stent of claim 83, wherein at body temperature the stent material is in a stress-induced martensitic state in the first condition of the stent and in an austenitic state in the second condition of the stent.

85. (new) The stent of claim 78, wherein the bar elements have a geometry and/or a width of the bar elements varies over the length thereof in such a way that the stresses which occur in the bar elements are below the respective plastic deformation limit of the stent material when the stent material makes the transition in the first condition of the stent from the martensitic state into a stress-induced martensitic state as a result of an increase in temperature.

86. (new) The stent of claim 85, wherein at least one said annular support portion is formed by a bar element which extends in a meander configuration in the peripheral direction of the stent and whose width decreases towards the center between two turning points.

87. (new) The stent of claim 80, wherein the bar elements have a geometry and/or a width of the bar elements varies over the length thereof in such a way that the stresses which occur in the bar elements are below the respective plastic deformation limit of the stent material when the stent material makes the transition in the first condition of the stent from the martensitic state into a stress-induced martensitic state as a result of an increase in temperature.

88. (new) The stent of claim 87, wherein at least one said annular support portion is formed by a bar element which extends in a meander configuration in the peripheral direction of the stent and whose width decreases towards the center between two turning points.

89. (new) The stent of claim 82, wherein the bar elements have a geometry and/or a width of the bar elements varies over the length thereof in such a way that the stresses which occur in the bar elements are below the respective plastic deformation limit of the stent material when the stent material makes the transition in the first condition of the stent from the martensitic state into a stress-induced martensitic state as a result of an increase in temperature.

90. (new) The stent of claim 89, wherein at least one said annular support portion is formed by a bar element which extends in a meander configuration in the peripheral direction of the stent and whose width decreases towards the center between two turning points.

91. (new) The stent of claim 84, wherein the bar elements have a geometry and/or a width of the bar elements varies over the length thereof in such a way that the stresses which occur in the bar elements are below the respective plastic deformation limit of the stent material when the stent material makes the transition in the first condition of the stent from the martensitic state into a stress-induced martensitic state as a result of an increase in temperature.

92. (new) The stent of claim 91, wherein at least one said annular support portion is formed by a bar element which extends in a meander configuration in the peripheral direction of the stent and whose width decreases towards the center between two turning points.

93. (new) The stent of claim 78, wherein at least one said annular support portion is formed by a bar element that extends in a meander configuration in the peripheral direction of the stent and that has a direction of curvature which changes in the central region between two turning points.

94. (new) The stent of claim 78, wherein at least one said annular support portion is formed by a bar element that extends in a meander configuration in the peripheral direction of the stent and of which at least a center line is in the shape of an elliptical arc segment in the region of the turning points.

95. (new) The stent of claim 78, wherein at least one said annular support portion is formed by a bar element that extends in a meander configuration in the peripheral direction of the stent wherein each two bar element portions that are adjacent in the peripheral direction of the stent and that extend between the turning points form the limbs of a V-shape.

96. (new) The stent of claim 80, wherein at least one said annular support portion is formed by a bar element that extends in a meander configuration in the peripheral direction of the stent and that has a direction of curvature which changes in the central region between two turning points.

97. (new) The stent of claim 80, wherein at least one said annular support portion is formed by a bar element that extends in a meander configuration in the peripheral direction of the stent and of which at least a center line is in the shape of an elliptical arc segment in the region of the turning points.

98. (new) The stent of claim 80, wherein at least one said annular support portion is formed by a bar element that extends in a meander configuration in the peripheral direction of the stent wherein each two bar element portions that are adjacent in the peripheral direction of the stent and that extend between the turning points form the limbs of a V-shape.

99. (new) The stent of claim 82, wherein at least one said annular support portion is formed by a bar element that extends in a meander configuration in the peripheral direction of the stent and that has a direction of curvature which changes in the central region between two turning points.

100. (new) The stent of claim 82, wherein at least one said annular support portion is formed by a bar element that extends in a meander configuration in the peripheral direction of the stent and of which at least a center line is in the shape of an elliptical arc segment in the region of the turning points.

101. (new) The stent of claim 82, wherein at least one said annular support portion is formed by a bar element that extends in a meander configuration in the peripheral direction of the stent wherein each two bar element portions that are adjacent in the peripheral direction of the stent and that extend between the turning points form the limbs of a V-shape.

102. (new) The stent of claim 84, wherein at least one said annular support portion is formed by a bar element that extends in a meander configuration in the peripheral direction of the stent and that has a direction of curvature which changes in the central region between two turning points.

103. (new) The stent of claim 84, wherein at least one said annular support portion is formed by a bar element that extends in a meander configuration in the peripheral direction of the stent and of which at least a center line is in the shape of an elliptical arc segment in the region of the turning points.

104. (new) The stent of claim 84, wherein at least one said annular support portion is formed by a bar element that extends in a meander configuration in the peripheral direction of the stent wherein each two bar element portions that are adjacent in the peripheral direction of the stent and that extend between the turning points form the limbs of a V-shape.